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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,252	07/15/2005	Masahiro Inoue	275414US3PCT	2737
22850	7590	05/30/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER WILLIAMS, THOMAS J	
			ART UNIT 3683	PAPER NUMBER
			NOTIFICATION DATE 05/30/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/542,252

Applicant(s)

INOUE ET AL.

Examiner

Thomas J. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/17/05; 6/01/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Acknowledgment is made in the receipt of the oath and priority papers filed July 15, 2005, the information disclosure statements filed October 17, 2005 and June 1, 2006.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference characters "10a" and "13a" are not mentioned in the description. Although 10a does appear in the abstract it should also appear in the detailed description for clarity. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2003/0083797 A1 to Yokoyama et al.

Re-claims 1-3, Yokoyama et al. disclose a sensor equipped hub unit comprising: a hub unit having a rotation-side raceway member 76 for a wheel to be attached thereto; a fixed-side raceway member 74 fixed to a vehicle body and rolling bodies arranged between the two raceway members, a sensor 34 is provided on the hub unit; a brake caliper is fastened to the fixed side raceway member of the hub unit as an assembly (see figure 1), the sensor device is a brake torque sensor provided on the fixed side raceway member; a caliper mount extends radially outwardly thereof and supports the caliper (the caliper mount is interpreted as the radial extension from the raceway), the sensor is provided at the base of the caliper mount; the sensor is a strain gauge (see paragraph 29 lines 11-13).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al. in view of US 4,618,159 to Kozyra et al.

Re-claims 4-6, Yokoyama et al. fail to teach a knuckle arm connected with the wheel, which is common for steering wheel assemblies.

Kozyra et al. teach a common steering knuckle assembly, wherein the assembly is provided with a knuckle attaching flange 36 that is integral with a caliper mount 32/34, the caliper mount is provided at the same position as the knuckle attaching flange. It would have been obvious to one of ordinary skill in the art to have provided the assembly of Yokoyama et al. with a knuckle flange integral with the caliper mount as taught by Kozyra et al., thus providing a means for using the assembly on a steering wheel.

8. Claims 4, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al. in view of JP 2001-304309 A to Nomura.

Re-claims 4, 5 and 7, Yokoyama et al. fail to teach a knuckle arm connected with the wheel, which is common for steering wheel assemblies.

Nomura teaches a common steering knuckle assembly, wherein the assembly is provided with a knuckle arm 19, a knuckle attaching flange 19, a caliper mount arm 17 is integral with the fixed side raceway (in that it is not easily separable), the caliper mount arm is provided at a position different from that of the knuckle attaching flange. It would have been obvious to one of ordinary skill in the art to have provided the assembly of Yokoyama et al. with a knuckle arm,

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knuckle attaching flange and a caliper mount arm as taught by Nomura, thus providing a means for using the assembly on a steering wheel.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al. in view of US 2002/0012484 A1 to Salou et al.

Re-claim 8, Yokoyama et al. fail to teach the strain gauge attached to a flange of the fixed side raceway.

Salou et al. teach a fixed side raceway provided with an integral flange, strain gauge sensors are affixed to the flange portions of the raceway. It would have been obvious to one of ordinary skill in the art to have provided the assembly of Yokoyama et al. with a fixed side raceway having flanges for affixing the strain gauge as taught by Salou et al., thus eliminating the need for replacing the strain gauges when replacing the caliper.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al. in view of Salou et al. as applied to claim 8 above, and further in view of US 5,366,233 to Kozyra et al.

Yokoyama et al. as modified by Salou et al. fail to mention the presence of a knuckle arm fixed to the flange of the fixed side raceway, as is common for steering wheels.

Kozyra et al. teach a steering knuckle arm attached to a flange separate from the raceway. This provides the vehicle the ability to steer. It would have been obvious to one of ordinary skill in the art to have provided the assembly of Yokoyama et al. as modified by Salou et al. a knuckle arm assembly as taught by Kozyra et al., thus providing the operator of the vehicle the ability to steer the vehicle as desired.

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Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miyazaki, Inoue et al. and Winters et al. teach the use of strain gauges with a brake assembly and the various positions that the gauges can be affixed with respect to the brake assembly.

12. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is 571-272-7128.

The examiner can normally be reached Wednesday-Friday from 6:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer, can be reached at 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-6584.

TJW

May 23, 2007

THOMAS J. WILLIAMS
PRIMARY EXAMINER

Thomas Williams
AJ 3683
5-22-07